REMARKS

The above-identified Application has been carefully reviewed with the Office Action of July 8, 2009, the Examiner's comments, and the art references cited therein in mind. In response thereto, Applicants submit the following arguments in support of patentability. Favorable reconsideration is hereby respectfully requested.

Claim Rejections - 35 U.S.C. §103

Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over Croak et al (US Patent # 7,468,984) in view of Sparrell et al (US Patent # 6,970,448). The Applicants respectfully disagree and submit that claim 1 is patentable and conforms to the provisions of 35 U.S.C. 103.

Claim 1 of the present invention defines a device for realizing disaster recovery of soft-switch based on a packet network, comprising at least two core control devices located in different places which provide control service for their respective access equipments;

wherein each of said core control devices further includes the following units used for disaster recovery:

a process unit, a database unit, a share unit, a synchronization process unit;

said process unit and database unit are independent of a processor and a database already existing within each of the core control devices, and are specifically for serving remote access equipments, thereby making the core control devices in different places be of mutual disaster recovery relation;

said share unit is used for sharing processing ability and data; and

said synchronization process unit is used for synchronizing data between the core control devices of mutual disaster recovery.

Neither Croak nor Sparrell, either separately or in combination, teaches or suggests

such features.

Regarding the method and apparatus for providing disaster recovery using network peering arrangements disclosed by Croak, "when an Application Server (AS) in a network fails, the network provider can send a call to a partner's network and uses an AS in the partner's network to process the call request" (column 1, lines 36-39 of Croak). It can be seen that in Croak, when an Application Server (AS) in a network fails, the core VoIP infrastructure to which the AS belongs still works and can "send a call to a partner's network and uses an AS in the partner's network to process the call request". Further, referring to Fig. 2 of Croak, it can be clearly seen that the Application Server (AS) is **not** a **core control** device. Therefore in Croak, when a part in the core VoIP infrastructure such as the AS fails, it will not bring a disaster to the core VoIP infrastructure. Thus Croak actually is only to realize reselecting a route when a part in the core VoIP infrastructure fails, but **not** to realize disaster recovery when the whole core VoIP infrastructure collapses.

However, the technical problem to be solved in the present invention is to provide a device for realizing disaster recovery of soft-switch based on a packet network, which makes the **core control** devices of the next generation network possess the disaster recovery function, thus, when one of the core control devices failed, the other core control device located elsewhere will take over the equipments under the control of the failure device, and ensure the continuous control service available (please see the first paragraph under the subtitle "Summary of the Invention" of the present invention). Therefore it can be seen that claim 1 of the present invention supports the disaster recovery when the core device(s) collapses.

The Applicants respectfully submit that claim 1 of the present invention is distinguishable from Croak. Comparing claim 1 of the present invention with Croak, it can be seen that there are at least the following distinguishing features between claim 1 of the present invention and Croak:

a) Claim 1 of the present invention defines a device for realizing disaster recovery of soft-switch based on a packet network, comprising at least two core control devices located in different places which provide control service for their respective access equipments. Croak, however, does **not** disclose these technical features.

The Office Action provides that:

> "Croak teaches a device for realizing disaster recovery of soft-switch based on a packet network (Figs. 1, 2, 5), comprising at least two core control devices (customer endpoint devices at location A and customer endpoint devices at location Z) located in different places which provide control service for their respective access equipments (column 3, lines 41-52)".

The Applicants respectfully disagree.

Firstly, please see column 3, lines 41-52 and Figs. 1 and 2 of Croak. The customer endpoint devices disclosed by Croak are located at the user side. To one of ordinary skill in the art, it is known that the core control device is not located at the user side. Therefore the customer endpoint devices disclosed by Croak are **not** core control devices. Actually, the customer endpoint devices disclosed by Croak are access equipments. As recited in claim 1 of the present invention, the core control devices provide control service for their respective access equipments. Therefore access equipments are **not** the core control devices recited in the present invention.

In Croak, the core control device is the Call Control Element (CCE) (please see column 1, lines 39-43, column 2, lines 48-58 and Figs. 1, 2). However, Croak does **not** disclose that the Call Control Element (CCE), as a core control device, has a function of disaster recovery. Actually, Croak **does not** support the disaster recovery of the core control device CCE, and the CCE disclosed by Croak even **can not** fail. Referring to column 4, lines 34-38 of Croak, there is a recitation of "CCE 211 forwards the call to CCE 231 in partner network 230 for the call to be processed. CCE 231, upon receiving the call setup message, access AS 234, flow 243, to retrieve the necessary service logic and application to process the call". Apparently, in Croak,

only when the core control device CCE does not fail, retrieving "the necessary service logic and application to process the call" will be possible. **Once** the core control device CCE failed in Croak, "necessary service logic and application to process the call" will be retrieved. That is to say, if the core control device CCE at location A or Z failed in Croak, the customer endpoint devices at location A or Z for example will **collapse** and they will be **unable** to realize disaster recovery. However, as mentioned above, claim 1 of the present invention can support the disaster recovery when the core control device fails.

Additionally, the device defined in claim 1 of the present invention is for realizing disaster recovery of soft-switch based on a packet network. Croak, however, does **not** involve any concept of "***soft-switch***".

b) In claim 1 of the present invention, "each of said core control devices further includes the following units used for disaster recovery: a process unit, a database unit, a share unit, a synchronization process unit; said process unit and database unit are independent of a processor and a database already existing within each of the core control devices, and are specifically for serving remote access equipments, thereby making the core control devices in different places be of mutual disaster recovery relation; said share unit is used for sharing processing ability and data; and said synchronization process unit is used for synchronizing data between the core control devices of mutual disaster recovery". Croak, however, does **not** disclose these technical features.

Firstly, as admitted in the Office Action by the Examiner, Croak does **not** disclose a synchronization process unit; the synchronization process unit is used for synchronizing data between the core control devices of mutual disaster recovery.

Secondly, in claim 1 of the present invention, "said process unit and database unit are **independent** of a processor and a database already existing within each of the core control devices, and are specifically for serving remote access equipments, thereby making the core

control devices in different places be of mutual disaster recovery relation". That is to say, in claim 1 of the present invention, besides the processor and database already existing within each of the core control devices, an additional set of process unit and database unit is provided in each of the core control devices. And the additional set of process unit and database unit provided in claim 1 of the present invention are **specifically** for serving remote access equipments, thereby making the core control devices in different places be of mutual disaster recovery relation. In other words, in claim 1 of the present invention, there are at least **two sets** of process unit and database unit; wherein one set of process unit and database unit is **independent** of the other processor and database already existing within each of the core control devices, and is **dedicated** for serving remote access equipments, thereby making the core control devices in different places be of mutual disaster recovery relation. In Croak, however, only **one** processor and **one** memory are disclosed. Croak does not disclose that there are **two** processors and **two** databases provided in the system. Furthermore, Croak does **not** disclose that an additional process unit and an additional database unit provided in the system are **dedicated** for serving remote access equipments, thereby making the core control devices in different places be of mutual disaster recovery relation.

Additionally as discussed above, the disaster recovery peering module 505 disclosed by Croak can only support the so-called "disaster recovery" when a part in the core VoIP infrastructure such as the AS fails, but can **not** support disaster recovery when the whole core VoIP infrastructure fails.

In summary, by technical scheme defined in claim 1 of the present invention, especially the above distinguishing technical features, the present invention provides a device for realizing disaster recovery of soft-switch based on a packet network, which makes the **core control devices** of the next generation network possess the disaster recovery function. Thus, when one of the core control devices failed, the other core control device located elsewhere will take

over the equipments under the control of the failure device, and ensure the continuous control service available. Croak neither discloses the above distinguishing technical features, nor provides any relative teachings for one of ordinary skill in the art at the time the invention was made to acquire the above distinguishing features and further solve the technical problem to be solved in claim 1 of the present invention. Actually, as discussed above, Croak **cannot** solve the problem to be solved in the present invention. Accordingly, claim 1 of the present invention is distinguishable from Croak for at least the above reasons.

Further, referring to Sparrell, it relates to wireless TDMA system and method for network communication. It can be seen that Sparrell does **not** suggest or teach the above distinguishing technical features as well. In particular, regarding the Examiner's assertion in the Office Action that "Sparrell's reference figure 2 discloses a synchronization process unit (34); the synchronization process unit is used synchronizing data between the core control devices of mutual disaster recovery (column 12, line 57-column 13, lines 1-4)", **the Applicants respectfully disagree**. The synchronization process unit 34 disclosed by Sparrell is a clocking synchronization process unit. That is to say, the synchronization process unit 34 disclosed by Sparrell is for providing ***clocking*** synchronization, but **not** for synchronizing ***data***. However in claim 1 of the present invention, the synchronization process unit provided is used for **synchronizing data** between the core control devices of mutual disaster recovery.

Therefore it is not obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teachings of Sparrell into the system of Croak to solve the technical problem to be solved in claim 1 of the present invention.

The above distinguishing technical features are not well known in the art.

Accordingly, for at least the above reasons, claim 1 has been non-obvious at the time the invention was made and is in condition for allowance.

Allowable Subject Matter

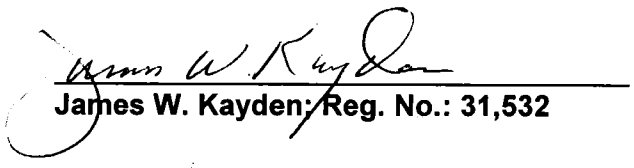
Claims 2-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants respectfully submit that claims 2-10 are in condition for allowance because they depend on independent claim 1, which is in condition for allowance, as discussed above.

CONCLUSION

With the amendments presented herein, it is believed that all the claims remaining in the Application are in condition for allowance. Early and favorable action in this regarding is hereby respectfully requested. Should there be any minor informalities remaining, the Examiner is respectfully requested to call the undersigned attorney so that this case may be passed to issue at an early date.

Respectfully submitted,



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